

CLAIMS

1. An electret filter medium, comprising a lactic acid polymer having a molar ratio of an L-lactic acid monomer to a D-lactic acid monomer in the range from 100 to 85 : 0 to 15 or from 0 to 15 : 85 to 100.

2. The electret filter medium according to Claim 1, wherein it is mainly composed of a lactic acid polymer that produces an endotherm of at least 0.5 J/g accompanied with crystal fusion.

3. The electret filter medium according to any one of Claims 1 and 2, wherein the content of lactide is at most 15%.

4. The electret filter medium according to any one of Claims 1 to 3, wherein it has a surface charge density of at least $1.2 \times 10^{-9} / \text{cm}^2$.

5. The electret filter medium according to any one of Claims 1 to 4, wherein 0.01 to 0.3 parts by weight of a nucleating agent is blended based on 100 parts by weight of the lactic acid polymer.

6. A process for producing the electret filter medium

according to any one of Claims 1 to 5, comprising: applying a direct current corona electric field to a nonwoven fabric while heating it to a temperature of 60°C to 140°C, wherein the nonwoven fabric comprises fibers mainly composed of a lactic acid polymer; and then cooling it to a temperature of 40°C or lower while applying the electric field to it.

5